

USSR

DAVYDOV, Yu. P., et al., Radiokhimiya, Vol 15, No 3, 1973, pp 452-454

addition to the monomeric form. The results of experiments in which $\text{UO}_2(\text{NO}_3)_2$ solutions were subjected to ultrafiltration confirmed those obtained by the dialysis method.

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Radiation Chemistry

USSR

UDC 541.182

DAVYDOV, YU. P."Colloids and Radiocolloids"

Leningrad, Rzdiokhimiya, Vol 14, Vyp 1, 1972, pp 140-142

Abstract: The hydroxide solubility product K_{sp} has been used to investigate the properties of colloids. This article attempts to establish a relationship between the value of the K_{sp} and the formation of colloids in solutions containing microconcentrations of metallic elements. In studies of $2 \times 10^{-5} M$ solutions of Pu(IV) it was shown that when the solution was filtered through a cellophane filter at pH of about 1.5 some of the Pu was retained on the cellophane indicating the initiation of colloid formation. Studies on ion exchange resins indicated that the colloid particles contained a very small number of atoms; these were mainly dimers, trimers and quatermers. The value of the K_{sp} of $Pu(OH)_4$ was determined by using as initial conditions those obtaining at the formation of the visible hydroxide precipitate, and must reflect the conditions necessary for the formation of dimers, trimers, etc. Zirconium (IV) was studied by the ion exchange method and it was shown that Zr(IV) formed dimers in a 1M solution of $HClO_4$. This solution formed a pre-

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DAVYDOV, YU. P., Radiokhimiya, Vol 14, Vyp 1, 1972, pp 140-142

precipitate when centrifuged and from the data the degree of polymerization was calculated to be 3 or 4. The solubility product of $Zr(OH)_4$ by this method is equal to 8×10^{-52} . If, however, the conditions for the formation of the negatively charged zirconium hydroxide particles were used, the K_{sp} was equal to 10^{-28} . For the prediction of conditions for the actual formation of negatively charged colloids for the radioelements it is necessary to use K_{sp} values other than those in the literature and ones which have no physical meaning. Therefore it was concluded that there is no relationship between the K_{sp} of the hydroxides of certain elements and the ability of these elements to form colloids.

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Adsorption

USSR

UDC 541.183.5:546.799.4

DAVIDOV, YU. P.

"Sorption of Hydrolyzed Pu(IV) Forms on Silica gel"

Leningrad, Radiokhimiya, Vol 14, No 2, 1972, pp 210-215

Abstract: A study of the sorption of hydrolyzed plutonium (IV) forms on silica gel was carried out, based on the hypothesis that hydrolyzed ions are capable of attaching other positively charged hydrolyzed ions yielding dimers, trimers, etc. This complex formation occurs via the OH- of O- bonding. A similar mechanism could exist in case of hydrolyzed plutonium (IV) ions bonding to the surface molecules of SiOH without prior dissociation of these groups to SiO⁻ and H⁺ ions. Experimental data obtained in HNO₃ solution, its acidity ranging from 0.5 M to pH 2.5, showed that in the area of Pu(IV) hydrolysis the ions absorbed are Pu(OH)⁴⁻ⁿ and their sorption ability is either equal to or higher than that of Pu⁴⁺ ions. The sorption of hydrolyzed Pu(IV) ions does not depend on the concentration of extraneous electrolyte in the concentration range of NaNO₃ from 0.1 M to 3.0 M.

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USSR

UDC 542.938:546.799.4

DAVYDOV, YU. P.

"Some Characteristic Properties of Hydrolyzed Forms of Plutonium (IV)"

Leningrad, Radiokhimiya, Vol 14, No 2, 1972, pp 216-220

Abstract: Two series of experiments were carried out measuring the optical density D as a function of the H^+ ion concentration in the solution and of the time the solutions were kept in 0.2 N HNO_3 . It has been shown that acidification of solutions from $pH > 1.0$ to 2 N HNO_3 does not affect the ionic ratio of Pu^{4+} to $Pu(OH)_n^{4-n}$ in that solution; it remains constant for several days. This is puzzling, since according to the ratio $K_p = K_1/K_2$, and due to the almost instantaneous equilibrium in the reaction $Pu^{4+} + H_2O \rightleftharpoons PuOH^{3+} + H^+$, it should be quite rapid. No possible explanation is given for this strange behavior, except that a reference is made to a generally anomalous behavior of plutonium ions.

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USSR

UDC 541.183.5:546.799.4

DAVIDOV, YU. P., and BOGATYREVA, I. G.

"Sorption of Pu(IV) by ion Exchange Resins in the Area of Plutonium (IV) Hydrolysis"

Leningrad, Radiokhimiya, Vol 14, No 2, 1972, pp 200-206

Abstract: Experiments were carried out aimed at finding out whether the hydrolyzed forms of plutonium (IV) possess the specificity of absorption and whether this specificity is due to the formation of monomeric hydroxy complexes in the solution or of the polynuclear hydroxy complexes. A wide range of acidity and concentration of plutonium in 7N HNO₃ was used on ion exchange resins KU-2, AV-17, and Dowex-1. The study showed that hydrolyzed monomeric Pu(IV) ions show no specificity in their behavior in respect to above resins. Several forms of complexes are found in the solution -- Pu⁴⁺, Pu(OH)³⁺, Pu(OH)₂²⁺, etc. -- and it is quite possible that only one of these ions is absorbed selectively. The polynuclear PU(IV) complexes exhibit lower sorption ability than the monomeric Pu(IV) ions.

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USSR

UDC 541.182

DAVYDOV, Yu. P.

"Colloids and Radiocolloids"

Leningrad, Radiokhimiya, Vol 14, Vyp 1, 1972, pp 140-142

Abstract: The hydroxide solubility product K_{sp} has been used to investigate the properties of colloids. This article attempts to establish a relationship between the value of the K_{sp} and the formation of colloids in solutions containing microconcentrations of metallic elements. In studies of $2 \times 10^{-5}M$ solutions of Pu(IV) it was shown that when the solution was filtered through a cellophane filter at pH of about 1.5 some of the Pu was retained on the cellophane indicating the initiation of colloid formation. Studies on ion exchange resins indicated that the colloid particles contained a very small number of atoms; these were mainly dimers, trimers and quatramers. The value of the K_{sp} of $Pu(OH)_4$ was determined by using as initial conditions those obtaining at the formation of the visible hydroxide precipitate, and must reflect the conditions necessary for the formation of dimers, trimers, etc. Zirconium (IV) was studied by the ion exchange method and it was shown that

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DAVYDOV, Yu. P., Radiokhimiya, Vol 14, Vyp 1, 1972, pp 140-142

Zr(IV) formed dimers in a 1M solution of HClO_4 . This solution formed a precipitate when centrifuged and from the data the degree of polymerization was calculated to be 3 or 4. The solubility product of Zr(OH)_4 by this method is equal to 8×10^{-52} . If, however, the conditions for the formation of the negatively charged zirconium hydroxide particles were used, the K_{sp} was equal to 10^{-28} . For the prediction of conditions for the actual formation of negatively charged colloids for the radioelements it is necessary to use K_{sp} values other than those in the literature and ones which have no physical meaning. Therefore it was concluded that there is no relationship between the K_{sp} of the hydroxides of certain elements and the ability of these elements to form colloids.

2/2

Polymers and Polymerization

USSR

UDC 541.121

DAVYDOV, YU. P., Institute of Nuclear Power Engineering, Academy of Sciences
Belorussian SSR

"The Use of Dialysis for Determining the Degree of Ion Polymerization in
Solutions"

Minsk, Doklady Akademii Nauk BSSR, Vol 15, No 1, Jan 71, pp 43-45

Abstract: The relationship between the values of the dialysis coefficient and
degree of polymerization of ions in solutions was studied. The following
equation is suggested:

$$\lg \left(\frac{1-D}{D} \right) = \lg K_n + (p-1) \lg C_{Mc}.$$

This equation connects experimentally determined quantities (dialysis coefficient D and equilibrium concentration) with the degree of polymerization of the investigated element in solution (p). The literature apparently contains no experimental data which could be analyzed in accordance with the above equation. The author's next task, therefore, is to obtain experimental data.

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USSR

UDC: 621.382.2

DAVIDOV, Yu. T. and MERKISHIN, G. V.

"Measuring the Multiplication Factor and the Level of the Current Through the Active Region of an Avalanche Photodiode With Guard Ring"

Leningrad, Fizika i tekhnika poluprovodnikov, No 10, 1972, pp 2072-2073

Abstract: In the development of optical sensors using avalanche photodiodes, it is important to know the value of the current entering the multiplication layer and the multiplication factor. This brief communication discusses the peculiarities of measuring these two quantities. The authors warn that the current through the guard ring may cause substantial errors in measurement of the multiplication factor for d-c, and show that the effect of this current can be reduced by using a pulsed optical signal of low duration and intensity, well focused in the center of the photodiode operating area, for the measurements. The results of such measurements on silicon photodiodes, with working area diameters of 100

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DAVYDOV, Yu. T. and MERKISHIN, G. V., Fizika i tekhnika poluprovodnikov, No 10
1972, pp 2072-2073

microns with a light spot of 90 μ and a pulse duration of 100 nsec,
are presented. Under these conditions, the error due to the ring
current is less than 10%.

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USSR

UDC 632.95

KRUTITSKAYA, M. N., KOL'TSOV, N. S., TRIKHANOV, M. D., SHOGAM, S. M.,
DAVYDOVA, A. N., YEGOROVA, I. L., and KUZOVLEVA, M. V.

"Method of Preparing Calcium Tetrathionate"

USSR Authors' Certificate No 264363, filed 27 Dec 68, published 4 Jun 70
(from RZh-Khimiya, No 1, 10 Jan 71, Abstract No 1N588P)

Translation: CaS_4O_6 (I) is obtained in an $\text{H}_2\text{S}_4\text{O}_6$ medium by the oxidation of calcium thiosulfate (II) with perhydrol, taken in 10% excess, at 10-12°. 52 g II are added in the course of 1 hr to a 13.5 ml, 27% solution of H_2O_2 , cooled to 10°, to which 96 ml $\text{H}_2\text{S}_4\text{O}_6$ (concentration 235 g/l) was added beforehand. The resultant suspension is filtered out from traces of sulfate; the filtrate is evaporated in vacuum, and the residue crystallized. 23 g of 98% dihydrate of I is obtained. The mother liquor remaining after crystallization is used to prepare $\text{H}_2\text{S}_4\text{O}_6$.

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1/2 008 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--CALCIUM TETRATHIONATE PREPARATION -U-

AUTHOR--(05)-KRUTITSKAYA, M.N., KOLTSOV, N.S., TRIKHANOV, M.D., SHOGAN,
S.M., DAVYDOVA, A.N.
COUNTRY ~~SS~~ INFO--USSR

SOURCE--USSR 264,363
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970, 47(9)
DATE PUBLISHED--03MAR70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL-SYNTHESIS, CALCIUM COMPOUND, THIOSULFATE, CHEMICAL
PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--3003/1779

STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0130612

UNCLASSIFIED

2/2 008 UNCLASSIFIED PROCESSING DATE--13NOV70
CIRC ACCESSION NO--AA0130612
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CA TETRATHIONATE IS PREPD. BY
OXIDIZING CA THIOSULFATE WITH PERHYDROL IN TETRATHIONIC ACID.

UNCLASSIFIED

USSR
CHEMISTRY
Adsorption Phenomena

USSR

UDC 532.61

KOSTIKOV, V. I., KOSHELEV, Yu. I., and DAVYDOVA, E. A., Moscow Institute of Steel and Alloys

"The Effect of a Homologous Series of Alcohols on Free Surface Energy of Pyrographite"

Moscow, Zhurnal Fizicheskoy Khimii, Vol 47, No 8, Aug 73, p 2149

Abstract: The effect of a homologous series of alcohols on free surface energy of pyrographite was investigated, noting that with increasing alcohol effect per CH₂ group the free surface energy drops by 25 erg/cm², reaching a minimum with decyl alcohol.

1/1

1/2 016 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--THE CHOICE OF A PRINCIPAL SCHEME OF HIGHLY MOBILE GAMMA THERAPEUTIC
APPARATUS -U-
AUTHOR-(04)-ATOVTANY, A.E., GORDON, V.I., DAVYDOVA, I.A., LITVAN, A.B.
COUNTRY OF INFO--USSR
SOURCE--MEDITSINSKAYA RADIOLOGIYA, 1970, VOL 15, NR 5, PP 28-31
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--IRRADIATION APPARATUS, MEDICAL APPARATUS, GAMMA RADIATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1998/0282 STEP NO--UR/0241/70/015/005/0028/0031
CIRC ACCESSION NO--AP0120971
UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120971

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PROPERTIES OF A KINEMATIC PRINCIPAL SCHEME ARE A FACTOR DETERMINING THE QUALITY OF THE GAMMA THERAPEUTIC APPARATUS FOR MOBILE IRRADIATION. THE ISSUE DISCUSSES KINEMATIC DIFFERENT GAMMA APPARATUS AND ANALYZES THE INFLUENCE OF PARAMETERS OF THE RADIATION HEAD ON THE TECHNICAL CHARACTERISTICS OF APPARATUS. A NEW SCHEME OF MOUNTING OF MECHANISMS OF THE RADIATION HEAD IS PROPOSED AS A POSSIBILITY OF ESSENTIAL IMPROVEMENT OF THE DESIGN OF GAMMA THERAPEUTIC APPARATUS FOR MOBILE IRRADIATION. FACILITY: MOSKOVSKIY N-I RENTGENO RADIOLOGICHESKIY INSTITUT MINISTERSTVA ZDRAVOOKHRANENIYA RSFSR.

UNCLASSIFIED

USSR

UDC 678.675:678.06-419.8:677.521

CHUDINA, L. I., TANUNINA, P. M., LITOVCHENKO, S. I., CHERVINSKAYA, M. A.,
CHERDASOV, M. V., VOROB'YEV, V. D., VLASOVA, K. N., KISELEV, B. A., and
DAVIDOVA, I. F.

"Polyimides and Polybenzimidazols for Plexiglasses and Cements"

Moscow, Plasticheskiye Massy, No 4, 1973, pp 15-17

Abstract: The physical and chemical properties were determined for a number of thermoplastics -- such as the polyimides (PI), polyamidoimides (PAI), and polybenzimidazols (PBI) -- forming 15-68% solutions with different solvents. The PAI and PBI plus three of the PI resins formed linear structures; two of the PI resins formed a three-dimensional structure. The linear resins have a greater strength than the crosslinked below temperatures of about 300°C. The data are given in several tables and graphs.

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USSR

UDC 577.4

DAVYDOVA, I. M.

"Dynamic Problem of Optimal Distribution with an Inhomogeneous Purpose Function"

V sb. Primeneniye mat. v ekon. (Application of Mathematics in Economics -- collection of works), vyp. 7, Leningrad, Leningrad University, 1972, pp 108-114 (from RZh-Kibernetika, No 7, Jul 72, Abstract No 7V510)

Translation: A further development of the ideas of branches and boundaries.

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USSR

UDC: 51

DAVYDOVA, I. M.

"An Algorithm for Solving the Dynamic Problem of Optimum Arrangement With a Nonhomogeneous Goal Function"

Tr. 4-y Zimn. shkoly po mat. programmir. i smezhn. voprosam, 1971, vyp. 2
(Works of the Fourth Winter School on Mathematical Programming and Related Problems, 1971, No 2), Moscow, 1971, pp 3-17 (from RZh-Kibernetika, No 5, May 72, Abstract No 5V425)

Translation: The method of branches and boundaries with unilateral circuit of the branches is used for solving the problem of discrete programming which arises in selecting the optimum arrangement of production. Introduction.

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USSR

UDC 669.18-412:621.746.753

DAVYDOVA, L. N., PIRUSSKIY, M. V., and SUROVOVA, V. N.

"Increasing the Resistance of 17GIS Steel to Brittle Fracture After Ladle Refining With Liquid Synthetic Slags"

Moscow, Stal', No 9, Sep 72, pp 795-798

Abstract: A comparative study was made of the cold brittleness of four 17GIS steel smeltings (a standard sheet 12.5 mm thick) obtained by: the conventional open-hearth method (I), with synthetic slag refining (II), with refining and strengthening by vanadium additions (III), and with refining and strengthening by vanadium and nitrogen additions (IV). Treatment of 17GIS steel with synthetic slag leads to a substantial temperature reduction in the transition to the brittle state (20 to 30°) and ensures better deformability under restricted conditions. With the application of dynamic and static loads, the onset of cracks and the development of strains in viscous and mixed fracture in 17GIS steel refined with synthetic slag is substantially higher than in conventional open-hearth steel. Nitride strengthening also increases resistance to brittle fracture. Synthetic-slag-refined 17GIS steel with nitrogen additions satisfies the requirements for metal used for the construction of large-diameter (220-1420 mm) pipelines in northern regions.

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USSR

UDC 621.643.001.5

2

BORISOV, P. P., SUROVOVA, V. N., IVANOV, A. G., DAVYDOVA, L. N., and
RUSSIYAN, A. V., VNIImontazhspetsstroy [All-Union Scientific Research Insti-
tute for Installation and Specialized Construction Operations]; ANUCHKIN,
M. P., VNIIST [All-Union Scientific Research Institute for the Construction
of Trunk Pipelines]

"Increasing the Breaking Strength of 17GLS Steel by Treating It With Synthetic
Slags"

Moscow, Stroitel'stvo Truboprovodov, No 7, Jul 71, pp 26-28

Abstract: The article describes results of a study at VNIImontazhspetsstroy
on the ability of specimens of 17GLS steel, refined in a ladle with synthetic
slag, to resist the propagation of static and dynamic bending cracks in the
stressed state. For comparison, a study was also made of specimens of the
steel which had not been refined with synthetic slag. It was found that
treatment of 17GLS steel with synthetic slag in a ladle increases the crack
initiation and propagation energy under all testing conditions and hence the

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USSR

BORISOV, P. P., et al., Stroitel'stvo Truboprovodov, No 7, Jul 71, pp 26-28

total energy to fracture. The treated steel is characterized by high resistance to crack propagation in the stressed state at low temperatures. The operating reliability of gas pipelines can be increased by using treated 17G1S steel.

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1/2 009
UNCLASSIFIED
TITLE--NEW SYNTHESIS OF N ACETYLNEURAMINIC ACID -U- PROCESSING DATE--13NOV70
AUTHOR--(03)-MIRZAYANOVA, G.I., DAVYDOVA, L.P., SAMOKHVALOV, G.I.
COUNTRY OF INFO--USSR
SOURCE--ZH. OBSHCH. KHIM. 1970, 40(3), 693-7
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--AMINO ACID, AMIDE, CHEMICAL SYNTHESIS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3002/0629 STEP NO--UR/0039/70/040/003/0693/0697
CIRC ACCESSION NO--AP0128168
UNCLASSIFIED

2/2 009 UNCLASSIFIED PROCESSING DATE--13NOV70
CIRC ACCESSION NO--AP0128168
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SHOWN ON MICROFICHE.
FACILITY: VSES. NAUCH.-ISSLED. VITAM. INST., MOSCOW, USSR.

UNCLASSIFIED

USSR

DAVYDOVA, L. S.

"Algorithm for Production of a Main Graph by Computer"

Tr. Mosk. Aviats. In-ta [Works of Moscow Institute of Aviation], 1972, No 250, pp 26-29 (Translated from Referativnyy Zhurnal Kibernetika, No 4, 1973, Abstract No 4V432, by I. Sigal).

Translation: An algorithm and program in ALGOL-60 are presented for the TA-IM translator to produce an adjacency matrix defining a convex polyhedron which describes the topology of the graph. There are many misprints in the program.

1/1

1/2 008
UNCLASSIFIED
TITLE--CATALYTIC FUNCTIONS OF CHLOROPLAST PEROXIDASES -U-
PROCESSING DATE--09OCT70
AUTHOR--(03)-IVANOVA, T.M., RUBIN, B.A., DAVYDOVA, M.A.
COUNTRY OF INFO--USSR
SOURCE--DOKL. AKAD. NAUK SSSR 1970, 190(1), 214-17
DATE PUBLISHED--70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--VEGETABLE CROP, CHLOROPLAST, ENZYME ACTIVITY, MITOCHONDRION,
PLANT CHEMISTRY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1990/1264
STEP NO--UR/0020/70/190/001/0214/0217
CIRC ACCESSION NO--AT0109348
UNCLASSIFIED

2/2 008

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AT0109348

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CHLOROPLASTS ISOLATED FROM THE LEAVES OF 60-70 DAY OLD CUCUMBER, RADISH, AND CABBAGE SPROUTS OXIDIZED PHLOROGLUCINOL AND EXHIBITED PEROXIDASE ACTIVITY. IN THE PRESENCE OF LIGHT BOTH PEROXIDASE AND PHLOROGLUCINOL OXIDASE ACTIVITY WERE STIMULATED IN THE CHLOROPLASTS BUT NOT IN THE LEUKOPLASTS AND MITOCHONDRIA. CHLOROPLAST PEROXIDASE SEEMS TO PARTICIPATE IN ASSIMILATION OF LIGHT ENERGY BY THESE ORGANOIDS, BUT THE EXACT MECHANISM IS NOT YET CLEAR.

FACILITY: INST. BIOKHM. IM. BAKHA, MOSCOW, USSR.

UNCLASSIFIED

USSR

DAVYDOVA, N. A., YUSHIN, A. YA.

UDC 629.78.015:536.24

"Experimental Study of Heat Transfer in Flow Over Plane Triangular Wings With Blunt Edges"

Uch. zap. Tsentr. aero-gidrodinam. in-ta (Scientific Notes of the Central Aerohydrodynamic Institute), 1970, Vol. 1, No. 6, pp 117-125 (from RZh-Raketo-stroyeniye, No 9, Sep 71, Abstract No 9.41.78)

Translation: Results of measurements of heat transfer in the flow over three plane triangular wings with edges blunted over a cylinder of radius $r = 1.5$, 2.5 or 5 mm in a supersonic flow with $M_\infty = 5$ and 13.6 are presented. Discrete calorimetric transducers and a heat sensitive dye were used in the heat transfer measurements. The effect of angle of attack and the degree of bluntness of the cylindrical edges on heat transfer to the wing was investigated. It is shown that current engineering methods of calculating heat exchange can be used to evaluate the intensity of heat transfer on the lower surface of the wing. 7 ill., 9 ref. Resume.

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USSR

UDC 536.24:532.526

DAVYDOVA, N. A., YUSHCHIN, A. Ya.

"Experimental Investigation of Heat Transfer Accompanying Flow Around Flat Clipped Delta Wings"

Uch. zap. Tsentr. aero-gidrodinam. in-ta (Scientific Notes of the Central Aerohydrodynamics Institute), 1970, 1, No 6, pp 117-125 (from RZh-Mekhanika, No 10, Oct 71, Abstract No 10B609)

Translation: The paper presents the results of measurements of heat transfer in a supersonic flow at Mach 5 and 13.6 around three flat delta wings clipped by a cylinder with a radius of 1.5, 2.5 and 5 mm. Calorimetric pickups and dye-type heat indicators were used in the heat transfer measurements. A study is made of the effect which the angle of attack and the amount of clipping have on heat transfer to the wings. It is shown that conventional engineering methods of calculation of heat exchange can be used to evaluate the intensity of heat transfer on the lower surface of the wing. Resumé.

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USSR

UDC 615.214.31.015.23

DAVYDOVA, O. N., and KUDRIN, A. N., Chair of Pharmacology, Faculty of Pharmacy, 1st Moscow Medical Institute imeni I. M. Sechenov, Moscow

"Search for Antagonists of Lysergic Acid Diethylamide (LSD)"

Moscow, Farmakologiya i Toksikologiya, Vol 35, No 1, Jan-Feb 72, pp 24-25

Abstract: After a toxic dose of LSD tartrate (1.5 mg/kg) or LSD base (1 mg/kg) had been administered intravenously to cats, the animals developed psychotic disturbances of behavior (a pronounced defensive reaction and aggressiveness, fear of mice). Intraperitoneal administration of galoperydol in doses of 3-5 mg/kg 30 min before the injection of LSD prevented the disturbances of behavior due to the action of LSD, but produced catatonia. Preliminary intraperitoneal injection of phenytron (beta-N-hexamethyleneimino-m-nitropropiofenone HCl) in doses of 40-60 mg/kg reduced to some extent the symptoms of LSD psychosis, but did not prevent them. Simultaneous preliminary administration to the cats of galoperydol (2-3 mg/kg) and phenytron (30-40 mg/kg) fully prevented the toxic action of LSD as manifested in disturbances of behavior and did not result in the development of catatonia.

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USSR

UDC: 621.375.029.64

DAVYDOVA, N. S., DANYUSHEVSKIY, Yu. Z., TELYATNIKOV, L. I., Members of the Scientific and Technical Society of Radio Engineering, Electronics and Communications imeni A. S. Popov

"Linear Theory of a Distributed Microwave Amplifier on a Zener Diode"

Moscow, Radiotekhnika, Vol 27, No 8, Aug 72, pp 77-81

Abstract: The authors consider the technical characteristics of a distributed Zener-diode amplifier in the linear approximation. Relations are found for the basic parameters as a function of the input signal frequency and the controlling bias current density. The parameters of a strip-line silicon amplifier with P^+-N-N^+ structure are calculated. It is found that such an amplifier can provide a gain of 25-30 dB/cm in a band of the order of 15%. The amplifier can act simultaneously as a phase shifter with electronic control, which makes it attractive for use as an active antenna element. The initial results will have to be refined to account for nonlinear effects which can have an appreciable influence on the basic parameters of the amplifier as the amplitude of the propagated wave increases.

1/1

1/2 019
UNCLASSIFIED
TITLE--PREPARATION OF SOME POLY,KETO ESTERS -U- PROCESSING DATE--30OCT70
AUTHOR--(04)-DAVYDOVA, S., BARABANOV, V.A., DOBROVOLSKAYA, N.V., PLATE,
N.A.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (2), 475-6
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--KETONE, ESTER, COMPLEX COMPOUND, POLYMER, PHENOL, ACETIC
ACID, TAUTOMERISM, SODIUM COMPOUND, POTASSIUM COMPOUND, LIGAND
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1997/1184 STEP NO--UR/0062/70/000/002/0475/0476
CIRC ACCESSION NO--AP0120031
UNCLASSIFIED

2/2 019

CIRC ACCESSION NO--APO120031

UNCLASSIFIED

PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. OXALOACETIC (I),
TEREPHTHALOYLDIACETIC, AND TEREPHTHALOYLBIS(ACETOACETIC) ACIDS WERE
CONDENSED WITH DIOLS SUCH AS HEXANEDIOL, BISPHENOL A, ETC. EITHER IN A
MELT OR IN MEPH OR C SUB6, H SUB6 TO GIVE POLYMERS POLYESTERS WHICH WERE
SOL. IN POLAR SOLVENTS, CAPABLE OF KETO ENOL TAUTOMERISM, AND ABLE TO
FORM TRANSITION METAL COMPLEXES. THE COMPLEX FORMATION OCCURRED ONLY
VIA THE NA OR K DERIVS. OF THE I POLYMERIC LIGANDS, WHILE THOSE FROM II
FORMED COMPLEXES READILY BY A PREVIOUSLY REPORTED ROUTE (DAVYDOV, ET
AL., 1968).
FACILITY: INST. NEFTEKHIM. SIN. IM. TOPCHIEVA,
MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC: 541.49:541.6

DAVYDOVA, S. I., PLATE, N. A., KARGIN, V. A., deceased

"Synthesis and Chemical Conversions of Metal-Containing Macromolecules"

Moscow, Uspekhi Khimii, Vol 39, No 12, Dec 70, pp 2256-2286

Abstract: The article is a survey covering the most important papers on synthesis and chemical conversions of metal-containing polymers of various types. In this review, the term metal-containing polymer compounds means organometallic polymers with organic principal chains in which there is a direct carbon-metal bond (regardless of the type of metal), salt-like compounds, particularly those with macromolecule-oxygen-metal bonds, and also complex polymer compounds which contain coordination bonded atoms of 3d-transition metals. Where possible, the reactivities of the metal-containing macromolecules and their low-molecular analogs are compared. The survey mentions unsuccessful attempts at synthesizing metal-containing macromolecules and their conversion products; papers in which the authors assumed synthesis of these compounds from the change in color of the reaction mixture alone. The article contains the following sections: 1. Introduction; 2. Organometallic polymers -- derivatives of metals of groups I, II and III. Use of lithium-containing polymers for initiating polymerization and synthesizing polyfunctional polymers;

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DAVYDOVA, S. L., et al., Uspekhi Khimii, Vol 39, No 12, Dec 70, pp 2256-2286

3. Organometal polymers -- derivatives of heavy metals. Metallized polymers and stabilization; 4. Complexes of transition metals with macromolecular ligands: a. reactions with participation of the metal-ligand bond; b. reactions of the coordinated macromolecule; 5. Factors which determine the properties of various types of polymer-metal chemical bond; 6. Peculiarities of chemical conversions of metal-containing macromolecules due to their polymer nature.

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DAVYDOVA, S. L., Vysokomolekulyarnyye Soyedineniya, Vol 12, No 5,
May 70, pp 1191-1194

of investigating polymer structure, natural polymers, biopolymers, etc. The main plenary lecture of the Section on Macromolecular Compounds was delivered by Professor O. WICHTERLE (Czechoslovakia) on "The Prospects for Polymer Science and Technology." The speaker considered possibilities for the synthesis of new types of organic and inorganic macromolecules and their properties. The second plenary lecture of the section was given by Professor S. OKAMURA (Japan) on "The Influence of Metal Salts on Polymerization Reactions." Four sectional lectures were delivered in the Section on Macromolecular Compounds (chairman of the session D. /transliterated 7 ALLEN), viz. "Structural and Mechanical Properties of Polymers at Low Temperatures and under the Action of a Shock Wave" by V. A. KARGIN (USSR), "The Specific Interaction of the Polyions of a Polyelectrolyte and Counter Ions" by ULRICH STRAUSS (West Germany), "Graft Copolymers of Cellulose" by V. STANNETT (U.S.), and "Latest

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Polymers

USSR

DAVYDOVA, S. L.

"Twenty-Second Congress on Pure and Applied Chemistry. Section on High-Molecular Compounds"

Moscow, Vysokomolekulyarnyye Soyedineniya, Vol 12, No 5, May 70, pp 1191-1194

Abstract: The Twenty-Second Congress of the International Union of Pure and Applied Chemistry (IUPAC), which was held in August 1969 in Sydney, Australia, for the first time included a section on high-molecular compounds (President of the Congress A. L. D. RIS /transliterated; possibly REESE, REECE, REES, RIES, REIS, etc. 7; Chairmen of the Organizing Committee A. G. ROSS and J. R. PRICE; members of the Organizing Committee responsible for the Section on Macromolecular Chemistry J. H. O'DONNELL, D. O. JORDON and G. A. BATTARD /transliterated 7). The main areas of polymer science represented in this section were graft copolymerization and polyelectrolytes, although other areas were also represented, viz. the latest methods

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DAVYDOVA, S. L., Vysokomolekulyarnyye Soyedineniya, Vol 12, No 5,
May 70, pp 1191-1194

of investigating polymer structure, natural polymers, biopolymers, etc. The main plenary lecture of the Section on Macromolecular Compounds was delivered by Professor O. WICHTERLE (Czechoslovakia) on "The Prospects for Polymer Science and Technology." The speaker considered possibilities for the synthesis of new types of organic and inorganic macromolecules and their properties. The second plenary lecture of the section was given by Professor S. OKAMURA (Japan) on "The Influence of Metal Salts on Polymerization Reactions." Four sectional lectures were delivered in the Section on Macromolecular Compounds (chairman of the session D. /transliterated 7 ALLEN), viz. "Structural and Mechanical Properties of Polymers at Low Temperatures and under the Action of a Shock Wave" by V. A. KARGIN (USSR), "The Specific Interaction of the Polyions of a Polyelectrolyte and Counter Ions" by ULRICH STRAUSS (West Germany), "Graft Copolymers of Cellulose" by V. STANNETT (U.S.), and "Latest

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USSR

DAVYDOVA, S. L., Vysokomolekulyarnyye Soyedineniya, Vol 12, No 5, May 70, pp 1191-1194

Methods of Investigating Polymers" by D. [transliterated] ALLEN (Great Britain).

The Polymer Section of IUPAC also heard 24 experimental reports (20 of these from Australia). Papers were presented by J. C. ARTHUR (U.S.), D. S. UETT [transliterated] (Australia), J. L. GARNETT and E. C. MARTIN (Australia), G. A. BATTARD [transliterated], G. W. TREGGAR and R. OLBREKHT [transliterated] (Australia), G. A. BATTARD [transliterated] and R. SAYDAK [transliterated] (Australia), J. H. BRADBURY and V. E. CHAPMAN [transliterated] (Australia), F. MACRITCHIE (Australia). A whole series of papers on the study of ion-exchange equilibria was presented by the Melbourne Department of CSIRO (Commonwealth Scientific and Industrial Research Organization). Authors included E. WEISS, B. A. BOLTO, R. McNEIL, A. S. MacPHERSON, R. SAYDAK [transliterated], G. [transliterated] A. SWINTON, R. E. WARNER, D. E. WEISS, D. WILLIS and A. M. KENNEDY. Papers were also presented by J. HOLLO,

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DAVYDOVA, S. L., Vysokomolekulyarnyye Soyedineniya, Vol 12, No 5, May 70, pp 1191-1194

E. LASZLO and M. TOT /transliterated / (Hungary), P. D. KEY /transliterated / and F. E. TRELOAR (Austria), R. J. ELDRIDGE (Australia), D. D. BLEYK /transliterated; possibly BLAKE /, P. T. MURPHY and G. N. RICHARDS (Australia), P. T. MORA and S. V. LYUBORSKIY /transliterated; possibly LUBORSKY / (U.S.), R. J. FLEMING and D. H. RENIKAR /transliterated / (Australia), K. FUJIMOTO and S. FUJIWARA (Japan), G. A. GOLDER /transliterated, possibly HOLDER / (Australia), J. G. WILLIAMS and O. DELATYCKI (Australia), P. E. M. ALLEN (Australia) and B. A. KESSEY /transliterated / (Great Britain), G. /transliterated / E. SCOTT and E. SENOGLLES (Australia), M. J. BOWDEN (Great Britain), J. H. O'DONNELL and R. D. SOTHMAN (Australia), and P. BRYANT (Australia).

The next IUPAC Congress, devoted to problems in organic chemistry and polymer chemistry, will be held in Boston in July 1971.

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USSR

UDC 547.446+547.447

FOKIN, A. F., KOMAROV, V. A., DAVIDOVA, S. M., FROSINA, K. V., and ABDULGANIYEVA, Kh. A.

"Preparation of Difluoronitroketones"

Leningrad, Zhurnal Organicheskoy Khimii, Vol 7, No 6, Jun 71, pp 1165-1167

Abstract: The difluoronitroalcohols (I) were prepared by reacting difluoronitromethane with aldehydes in the presence of $K_2CO_3:O_2NCHF_2 + RCOH$

$O_2NCF_2C(OH)R$ (I; R = Me, Et, Pr, Ph). By oxidizing compounds I with chromic acid, the difluoronitroketones $O_2NCF_2C(=O)R$ (II; R = Me, Et, Pr, Ph) were obtained. The difluoronitroketones were distillable colorless liquids. As distinguished from nitroperfluoroacetone, the only fluoronitroketone known hitherto, which does not form either a semicarbazone or 2,4-dinitrophenylhydrazones, II (R = Me) formed a 2,4-dinitrophenylhydrazone (m. p. 122°). II (R = Me), on which the reactions of the CO group of compounds II were studied, formed a cyanohydrin (m. p. 38°, b. 73°/6 mm) on being acted upon by HCN in the presence of NaCN. Bromination of II (R = Me) in concentrated H_2SO_4 yielded the monobromopropanone $O_2NCF_2C(=O)CH_2Br$ and the dibromopropanone $O_2NCF_2C(=O)CHBr_2$. The properties of the new compounds that have been prepared are listed. The yields of II in the preparation from I were 51-85%.

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1/2 018 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--LIPORIBONUCLEOPROTEIN COMPLEX AS AN INTEGRAL PART OF ANIMAL CELL
PLASMA MEMBRANES -U-
AUTHOR--(02)--DAVYDOVA, S.YA., SHAPOT, V.S.

COUNTRY OF INFO--USSR

SOURCE--FEBS (FED. EUR. BIOCHEM. SOC.) LETT. 1970, 6(4), 349-51

DATE PUBLISHED--70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--LIVER, TUMOR, RNA, CELL MEMBRANE, NUCLEOPROTEIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--3001/0931

STEP NO--NE/0000/70/006/004/0349/0351

CIRC ACCESSION NO--AP0126590

UNCLASSIFIED

2/2 018 UNCLASSIFIED PROCESSING DATE--30OCT70
CIRC ACCESSION NO--AP0126590
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PLASMA MEMBRANE RNA FROM RAT LIVER
AND RAT HEPATOMA ARE INTEGRATED INTO A TRIPLE LIPORIBONUCLEOPROTEIN
COMPLEX. FACILITY: INST. EXP. CLIN. ONCOL., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 616.12-008.331.1-092.9-08-039.71:612.273.2.017

MEYERSON, F. Z., BARBARASH, N. A., and DAVYDOVA, T. M., Laboratory of Experimental Cardiology, Institute of Normal and Pathological Physiology, Academy of Medical Sciences USSR, and Chair of Normal Physiology, Kemerovo Medical Institute

"Preliminary Adaptation to Altitude Hypoxia as a Means of Preventing DOCA-Salt Hypertension in Rats"

Moscow, Kardiologiya, No 7, 1971, pp 14-22

Abstract: In one series of experiments, rats were exposed to intermittent hypoxia by being kept in a pressure chamber 6 hours daily for 48 days at simulated altitudes that were gradually increased from 1,000 m to 5,500 m. In another series, rats were exposed to natural hypoxia for 71 days continuously in a place situated 1,650 m above sea level. After 16 to 21 days DOCA-salt hypertension was induced by unilateral nephrectomy, substitution of a 1% sodium chloride solution for drinking water, and two subcutaneous implantations of DOCA powder. Preliminary adaptation to intermittent altitude hypoxia was found to have a definite prophylactic effect on the experimentally induced hypertension as shown by the fact that the elevation of pressure in the adapted animals was one-half that in the control. The results of exposure to continuous natural hypoxia were inconclusive.

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USSR

UDC 669.295.046.43

RUBAN, N. N., DAVYDOVA, T. YA., CHERNYSHOVA, T. A., KOPYLOVA, YE. A.,
KOLDOBSKAYA, K. N.

"Solubility of Titanium Tetrachloride in Melts of Alkali and Alkaline-Earth Metals"

O rastvorimosti chetyrekhkhlorigo titana v rasplavakh shchelochnykh i shchelochno-zemel'nykh metallov, Institute of Metallurgy and Beneficiation, Kazakh SSR Academy of Sciences, Alma-Ata, 1970, 88 pp, ill, 11-entry bibliography (from RZh-Metallurgiya, No 4, Apr 71, Abstract No 4G227DYeP)

Translation: The results of studying $TiCl_4$ solubility in melts made up of a mixture of chlorides of alkali and alkaline earth metals, which has significance in the processes of chlorinating raw material containing Ti and when purifying $TiCl_4$, are discussed. The solubility of $TiCl_4$ depends little on the temperature or the composition of the solvent. It depends to some extent on the duration of the experiments. According to infrared spectroscopic and petrographic analysis data, the solubility of $TiCl_4$ in a melt of chlorides of alkali and alkaline earth metals is directly related to the presence of residual water in it. There are 6 illustrations, 5 tables, and an 11-entry bibliography.

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USSR

UDC (678.84+678.746.22-139).002.612

DAVYDOVA, V. P., YERUNOVA, G. G., and YEREMINA, L. K., All-Union Scientific Research Institute of Synthetic Rubber imeni S. V. Lebedev

"Graft Copolymers of Siloxane Rubber and Acrylonitrile"

Moscow, Kauchuk i Rezina, No 8, 1970, pp 1-3

Abstract: A study was made of the composition and properties of graft copolymers of dimethylvinylsiloxane rubber and acrylonitrile, synthesized with the use of different solvents in the presence of a radical polymerization initiator. It was found that the structure of the graft copolymer varies according to the solvent in which the grafting was performed. The best technological properties are found in graft copolymers obtained in gasoline, cyclohexane or n-heptane. The glass transition temperature is $115 \div 121.5^\circ \text{C}$, which is not very much different from the glass transition temperature of dimethylsiloxane rubber. Vulcanizates of the graft copolymers are analogous to siloxane rubbers in frost and heat resistance. They are considerably superior to rubbers of SKH-40 in heat aging resistance, but inferior to siloxane rubbers. In oil resistance, rubbers of the graft copolymers take an intermediate position between SKH-40 and SKTV rubbers. Graft copolymers containing ~ 40 percent acrylonitrile and filled with aerosil (20 parts by 1/2

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DAVYDOVA, V. P., et al., Kauchuk i Rezina, No 8, 1970, pp 1-3

weight) provide optimal oil resistance data.

L. P. TKACHEVA and T. F. DUBYASHKINA took part in the experimental work.

1/2 025 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--INHIBITORS OF THE ACID CORROSION OF IRON STUDIED BY AN IMPEDANCE
METHOD -U-
AUTHOR--(03)-PODOBAYEV, N.I., DAVYDOVA, V.P., SALEM, R.R.

COUNTRY OF INFO--USSR

SOURCE--ZASHCH. METAL. 1970, 6(2), 235-6

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--METAL CORROSION, IRON ALLOY, STEEL, CORROSION INHIBITOR,
HYDROCHLORIC ACID, ELECTRIC IMPEDANCE, ACID CORROSION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3008/1046

STEP NO--UR/0365/70/006/002/0235/0236

CIRC ACCESSION NO--AP0138068

UNCLASSIFIED

2/2 025 UNCLASSIFIED PROCESSING DATE--04DEC70
CIRC ACCESSION NO--AP0138068
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ACTION OF ALDEHYDES, UNSATD.
ALCS. AND P, S, AND N CONTG. COMPS. ON THE CORROSION OF ARMC0 FE IN 1
AND 5N HCL AT 20 PLUS OR MINUS 1DEGREE WAS STUDIED BY THE USE OF AN
A.-C. BRIDGE (400 HZ), IN A 10 MV POTENTIAL RANGE. THE INVESTIGATIONS
WERE CARRIED OUT IN H. THE RELATIVE CHANGES NC OF DIFFERENTIAL
CAPACITIES C, DEFINED AS NC EQUALS 100 (C SUBO MINUS C)-C SUBO, WERE
COMPARED WITH THE COEFFS. OF PROTECTIVE ACTION OF INHIBITORS, EXPRESSED
BY Z EQUALS 100 (P SUBO MINUS P)-P SUBO WHERE P IS THE CORROSION RATE,
AND THE SUFFIX O REFERS TO THE VALUES WIHTOUT USE OF THE INHIBITOR. THE
COMPS. INVESTIGATED ARE ADSORBED BY THE METAL AND ITS C DECREASES
WITHIN A WIDE POTENTIAL RANGE. THE MOST EFFECTIVE WERE 1,HEXYN, 3,OL
AND DIPROPARGYL METHYLCYCLOHEXYLPHOSPHONATE. THE LOWEST EFFECTIVENESS
WAS SHOWN BY THE S CONTG. COMPS. FACILITY: MOSK. PEDAGOG.
INST. IM. LENINA, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC: 669.24'26:620.183

VINOGRADOVA, N. I., DAVYDOVA, V. V., MAKHANEK, G. V., PETROVA, S. N.,
SADOVSKIY, V. D., Leningrad Polytechnic Institute imeni Kalinin

"Application of a Metallographic Method for Determination of the Depth of
Surface Hardening in Nickel-Chromium Based Alloys"

Moscow, Zavodskaya Laboratoriya, No 11, 1972, pp 1359-1360.

Abstract: The influence of the chemical composition of alloys on the possibility of metallographic determination of strain hardening by decoration of dislocations with the carbide phase liberated upon aging is studied. The method can be used for nickel-chromium alloys of any composition with carbon contents of at least 0.05%. Hardening 20-30 μ up to several millimeters in depth is revealed.

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1/2 024 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--ADSORPTION OF SURFACE ACTIVE IONS ON RHODIUM -U-

AUTHOR--(03)-BALASHOVA, N.A., GOROKHOVA, N.T., DAVYDOVA, ZH.A.

COUNTRY OF INFO--USSR

SOURCE--ELEKTROKHIMIYA MAR. 1970, 6, (3), 436-440

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--RHODIUM, SURFACE ACTIVE AGENT, ION, ADSORPTION, BROMIDE,
BIBLIOGRAPHY, ELECTRODEPOSITION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/0416

STEP NO--UR/0364/70/006/003/0436/0440

CIRC ACCESSION NO--AP0124167

UNCLASSIFIED

2/2 024

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0124167

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ADSORPTION OF SURFACE ACTIVE IONS, PARTICULARLY CD PRIME2 POSITIVE (FROM COSO SUB4 SOLUTIONS) ARE BR PRIME NEGATIVE (FROM NABR SOLUTIONS), ON THE SURFACE OF A RH ELECTRODE (FORMED BY ELECTRODEPOSITING RH ON PT) WAS STUDIED AND CORRELATED WITH THE ZERO CHARGE POTENTIALS IN THE CORRESPONDING ELECTROLYTES. THE RELATIVELY INTENSIVE ADSORPTION OF CD PRIME2 POSITIVE AND BR PRIME NEGATIVE IONS ON THE RH SURFACE (AS COMPARED WITH NA PRIME POSITIVE AND SO SUB4 PRIME2 NEGATIVE FROM NA SUB2 SO SUB4) AND THE SLOWNESS OF THEIR AD AND DESORPTION, AS WELL AS THE ZERO CHARGE CHARACTERISTICS, ALL POINTED TO THE EXISTENCE OF A CHEMISORPTIVE TYPE OF ADSORPTION.

UNCLASSIFIED

1/2 029 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--SOLVOLYTIC REACTIONS OF COMPLEX URANYL FLUORIDES -U-
AUTHOR--(02)-DAVIDOVICH, R.L., BUSLAYEV, YU.A. *D*
COUNTRY OF INFO--USSR
SOURCE--DOKL. AKAD. NAUK SSSR 1970, 191(2), 355-7
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--X RAY ANALYSIS, IR SPECTRUM, SPECTROSCOPIC ANALYSIS,
CRYSTALLIZATION, FLUORIDE, URANIUM COMPOUND, COMPLEX COMPOUND

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3002/1274 STEP NO--UR/0020/70/191/002/0355/0357
CIRC ACCESSION NO--AT0128689
UNCLASSIFIED

2/2 029

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AT0128688

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE BEHAVIOR OF COMPLEX URANYL FLUORIDES WAS STUDIED IN HF SOLNS. BY DISSOLVING SAMPLES OF SALTS M SUB3 UO SUB2 F SUB4 (M EQUALS K, RB, CS), M SUB2 UO SUB2 F SUB4 .H SUB2 O (M EQUALS RB, CS), AND K SUB5 (UO SUB2) SUB2 F SUB5 IN AN EXCESS OF 40PERCENT HF WITH HEATING. THE SOLNS. WERE EVAPD. TO OBTAIN PPT. CHEM. ANAL. SHOWED THAT COMPOS. HAVING THE GENERAL FORMULA M(UO SUB2) SUB2 F SUB5 (M EQUALS K, RB, CS) ARE FORMED. UNDER THE SAME CONDITIONS THE NH SUB4 PRIME POSITIVE URANYL FLUORIDES LOSE FEWER NH SUB4 F MOLS. THAN THE ALKALI METAL URANYL FLUORIDES DO THE RESP. SIMPLE FLUORIDE MOLS. THE INDIVIDUALITY OF THE ((UO SUB2) SUB2 F SUB5) PRIME NEGATIVE OF K, RB, AND CS WAS CONFIRMED BY X RAY AND IR SPECTROSCOPY. A SIMPLE METHOD IS SUGGESTED FOR PREPG. COMPOS. HAVING THE COMPN. M(UO SUB2) SUB2 F SUB5 BASED ON THE RECRYSTN. OF M SUB3 UO SUB2 F SUB5 FROM A 40PERCENT SOLN. OF HF. FACILITY: INST. OBSHCH. NEORG. KHIM. IM. KURNAKOVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 014 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--SYNTHESIS AND X RAY DIFFRACTION CHARACTERISTICS OF FLUORZIRCONATES
OF DIVALENT METALS -U-
AUTHOR--(04)-CAVIDOVICH, R.L., LEVCHISHINA, I.F., KAYDALOVA, T.A., BUSLAEV,
YU.A.
COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(3), 493-7.

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--X RAY DIFFRACTION ANALYSIS, COMPLEX COMPOUND, FLUORIDE,
ZIRCONATE, CADMIUM COMPOUND, CHEMICAL SYNTHESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/1886

STEP NO--UR/0363/70/006/003/0493/0497

CIRC ACCESSION NO--AP0115705

UNCLASSIFIED

2/2 014 UNCLASSIFIED PROCESSING DATE--13NOV70
 CIRC ACCESSION NO--AP0115705
 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CONDITIONS WERE INVESTIGATED FOR SYNTHESIZING INDIVIDUAL COMPLEX ZR FLUORIDES WITH BIVALENT METALS AND THE X RAY DIFFRACTION CHARACTERISTICS FOR THE SALTS PREPD. ARE PRESENTED. THE STUDY OF THE INTERACTION BETWEEN THE FLUORIDES OF THE BIVALENT TRANSITION METALS AND THE ZRO SUB2 SOLN. IN HF SHOWED THAT SALTS OF ZRF SUB6 PRIME2 NEGATIVE FORM AT THE MOLAR RATIO EQUAL TO 1:1. THE ONLY COMPD. WHICH IT WAS NOT POSSIBLE TO SYNTHESIZE WAS CD SUB2 ZRF SUB8.6H SUB2 O. ALL SYNTHESIZED HEXAFLUOROZIRCONATES ARE SOL. IN WATER. THE PRESENCE OF A LARGE EXCESS OF THE HF PREVENTS THE FORMATION OF THE OCTAFLUORO SALT. X RAY DIFFRACTION STUDIES SHOW THAT A LARGE ISOSTRUCTURAL SERIES OF THE COMPLEXES IS FORMED. THE UNIT CELL PARAMETERS OF COMPLEX FLUORIDES OF THE COMPN. MZRF SUB6.6H SUB2 O WERE DETD.; THE LATTER ARE ISOSTRUCTURAL WITH FESIF SUB6 TIMES 6H SUB2 O. ALSO, THE SYNTHESIZED OCTAFLUOROZIRCONATES OF THE BIVALENT METALS ARE INDIVIDUAL CHEM. COMPDs. THE X RAY DIFFRACTION PATTERNS FOR M SUB2 ZRF SUB8.12H SUB2 O DIFFER FROM THOSE FOR THE HEXAFLUOROZIRCONATES AND FOR THE CORRESPONDING FLUORIDES OF THE BIVALENT METALS. FACILITY: OTD. KHIM. DAL'NEVOST. FILIALA IM. KOMAROVA, VLADIVOSTOK, USSR.

UNCLASSIFIED

172 006 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--SYNTHESIS OF THE ORTHOMETHYL ESTER OF GLYCINE -U-

AUTHOR--(03)--RUGGZHIN, S.V., DAVIDOVICH, YU.A., KORSHAK, V.V.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAÐ. NAUK SSSR, SER. KHIM. 1970, (4), 956

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL SYNTHESIS, ESTER, GLYCINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3006/1301

STEP NO--UR/0062/70/000/004/0956/0956

CIRC ACCESSION NO--AP0134975

UNCLASSIFIED

2/2 008 UNCLASSIFIED PROCESSING DATE--20NOV70
CIRC ACCESSION NO--AP0134975
ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. HEATING 2L G (H SUB3 N
PRIMEPOSITIVE CH SUB2 C, (OME):N PRIMEPOSITIVE H SUB2) 2CL PRIMENEGATIVE
IN 250 ML MEON 2 HK AT 40DEGREES, COOLING THE MIXT. TO 0DEGREES, AND
TREATING IT SLOWLY WITH CONCD. MEON IN MEON GAVE 40PERCENT H SUB2NCH
SUB2 C(OME) SUB3, B SUB10-12 52-5DEGREES, N PRIME20 SUBD 1.4267, D
PRIME20 1.045 (PURE). FACILITY: INST. ELEMENTOORG. SOEDIN.,
MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 621.384.6

BASIN, L.A., BOBYKIN, B.V., DAVYDOVSKIY, V.Ya., KEL'MAN, V.M., FINGENOV, P.A.,
YAKUSHEV, YE. M. [In-t yadern. fiz. AN KazSSR--Institute Of Nuclear Physics, AS,
Kazakh SSR]

"Magnetic Prism"

USSR Author's Certificate No 255429, filed 2 Mar 68, published 31 Mar 70 (from
RZh--Elektronika i yeye primeneniye, No 11, November 1970, Abstract No 11A268P)

Translation: The magnetic prism which is patented, consisting of an electromagnetic
with extended pole shoes of parallelepiped form, differs in the fact that with the
object of reducing the inhomogeneity of a two-dimensional magnetic field and
suppreseing the dispersal of the fields, the prism contains another such electro-
magnet located above the first, while the winding of both electromagnets is connect-
ed in opposition, and a gasket [prokladka] is mounted between the poles of the
magnet and the yoke.

1/1

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USSR

UDC 537.311.33:546.48.221

GALUSHKA, A. P., DAVYDYUK, G. YE., and KONOZENKO, N. D., Institute of Nuclear Research, Academy of Sciences Ukrainian SSR

"Influence of Heterogeneities σ on Certain Properties of CdS Single Crystals"

Moscow, Izvestiya Akademii Nauk SSSR, Neorganicheskiye Materialy, No 9, Sep 73, pp 1506-1510

Abstract: The technology used today for growing binary compounds A_2B_6 does not permit producing large ideal single crystals of these semiconductors. The experiments conducted by the authors involved use of CdS single crystals grown by the method of zone sublimation. The authors found that the heterogeneous distributions of conductivity in the CdS single crystals grown by this method are due to the heterogeneous distribution throughout the mass of the crystal of fine traps associated with the natural defects in the lattice. They studied the influence of intensity of exposure on the mobility of carriers and the distribution of conductivity. The article contains 4 figures and 11 bibliographic references.

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USSR

UDC 541.183.5:546.799.4:546.431'226

GREBENSHCHIKOVA, V. I., DAVYKOV, Yu. P., and PERSHIN, A. S.

"The Question of the Adsorption of Pu^(IV) on a BaSO₄ Precipitate"

Leningrad, Radiokhimiya, Vol XIII, No 3, 1971, pp 442-443

Abstract: As is well known, adsorption of mono- and bivalent cations on polar crystals is subject to the laws of secondary electrostatic adsorption, while adsorption on tri- and tetravalent metals shows a number of deviations from those laws. The present study was made to obtain experimental data on the adsorption of tetravalent plutonium in the region of its hydrolysis on a BaSO₄ suspension recrystallized to form a constant surface. Data obtained indicate clearly that the equilibrium distribution of Pu^(IV) between the BaSO₄ precipitate and its saturated solution is established in 10-15 min. -- evidence of the adsorption capture of plutonium by the BaSO₄ surface. Also observed was a dependence of plutonium adsorption on SO₄²⁻ ion concentration and H⁺ ion and Na⁺ ion concentration, indicating that the plutonium is adsorbed twice -- that is, it enters the external "lining" of a double electrified layer. Adsorption evidently increases in the pH = 0.8-2.4 interval. Further, it is concluded that either hydrolyzed Pu^(IV) ions are not adsorbed

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GREBENSHCHIKOVA, V. I., et al., Radiokhimiya, Vol XIII, No 3, 1971, pp 442-443

on a BaSO_4 precipitate, or else that the adsorbability of the hydrolyzed forms is less than that of $\text{Pu}^{(\text{IV})}$ ions.

The tests showed that with $\text{pH} = 1.4$ (ca. 40% of $\text{Pu}(\text{OH})_3^+$ was present in the solution), there is increase in the surface charge of the BaSO_4 precipitate, while with $\text{pH} = 1.0$ and $\text{pH} = 1.8$ there is competitive action by Na^+ ions.

The general conclusion reached is that either hydrolyzed forms of $\text{Pu}^{(\text{IV})}$ are not adsorbed on a BaSO_4 , or else are adsorbed according to the laws of secondary electrostatic adsorption. Further experiments are now in progress, including some to determine the condition of $\text{Pu}^{(\text{IV})}$ in solution.

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USSR

UDC 621.395.5:621.317

DAVYLOV, S. A., NIKOLAYEVA, G. G., SEKNIN, V. G.

"Tests of Units of Apparatus for Long-Distance Service on Automatic Machine for Matrix Tests"

V sb. Metody razrab. radioelektron. apparatury, No 1 (Methods for Development of Radioelectronic Apparatus, No 1), Moscow, 1970, pp 137-141 (from RZh--Elektrosvyaz', No 9, September 1970, Abstract No 9.64.18)

Translation: The paper discusses tests of units of apparatus for long-distance service on an automatic machine for matrix tests. A matrix (8 x 8) of possible nonrecurrent situations, including Q of the failures, is checked on the automatic machine. The failure matrix is processed by the integral method. The coordinates are determined for the center of gravity of an n-dimensional region ($n = 8$) of trouble-free operation, as well as the projections of the center on the axes, i.e., the optimum values of the parameters and their tolerance. After a choice of the optimum parameters of the units and their tolerances, repeated tests are conducted. The failure situations are printed on a telegraph tape in the form of a group of decimal figures. Interpretation of them makes it possible to determine the character of the failure situations, to evaluate whether the system operates stably (i.e., no point of failure in the area of efficiency of the scheme), to determine correlation dependences, 1/2

- USSR

DAVYLOV, S. A., et al., V sb. Metody razrab. radioelektron. apparatury, No 1 (Methods for Development of Radioelectronic Apparatus, No 1), Moscow, 1970, pp 137-141 (from RZh--Elektrosvyaz', No 9, September 1970, Abstract No 9.64.18)

and to predict the probability of reliable operation. As an example, the results are presented of tests of a low-frequency trigger in which six parameters (resistances) varied, broken into eight parts, with three pairs of transistors. Interruptions of the situation were produced at a frequency of 10 Hz. The testing time with one pair of transistors amounted to 7 hours 30 minutes. One illustration. D.B.

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USSR

UDC 535.373.1(083.76)

BERLOVSKIY, A. YA., DAYCH, A. R., TSIRLIN, YU. A.

"The Standardization of Scintillation Products"

Kharkov, Monokristally, Stsintillyatory i Organicheskiye Lyumino-
fory -- Sbornik (Monocrystals, Scintillators, and Organic Lumino-
phores -- Collection of Works), No 5, 1970, pp 278-281 (from
Referativnyy Zhurnal, Metrologiya i Izmeritel'naya Tekhnika, No
12, 1970, Abstract No 12.32.1500)

Translation: We do not have as yet the conditions necessary for standardization, namely -- reliability and unity of measurements, getting a result with a specific and known error, attachment to an international system of units. This has necessitated standardization and the creation of an appropriate testing service. The system is based upon a standard scintillator (stilbene) with respect to the totality of its physicochemical and scintillation properties. We have defined the absolute technical light output of the standard (%). For all standard scintillators,

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USSR

BERLOVSKIY, A. YA., et al, Monokristally, Stsintillyatory i Organicheskiye Lyuminofoxy -- Sbornik, No 5, 1970, pp 278-281

model detectors have been developed with diameters equal to the heights, and standard values of the light output have been defined for types and sizes subject to standardization. The light output of these types and sizes is expressed in terms of the light output of the standard. Working specimens for the producing enterprises are compared with the model scintillators. To eliminate indeterminacy in the resolution of the scintillator, the natural resolution of NaI (Tl) is measured. Already now, interested organizations can obtain scintillation detectors of NaI (Tl), stilbene, and plastic scintillators that have been compared with the above-mentioned standard scintillator. 6 bibliographic entries.

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USSR

UDC 620.17

AGARONIK, V. Ya., VASIL'YEV, A. A., DAYCHIK, M. L.

"Study of Characteristics of High Temperature Tensoresistors"

Issled. Temperatur. Napryazheniy [Studies of Temperature Stresses -- Collection of Works], Moscow, Nauka Press, 1972, pp 103-132, (Translated from Referativnyy Zhurnal, Mekhanika, No 11, 1972, Abstract No 11 V1347 by the author's).

Translation: Methods and results are presented from studies of temperature and time characteristics of constantan, nichrome, Kh20N80Yu and Kh20N80YuD chrome-nickel alloy, NM23KhYu nickel-molybdenum alloy and OKh21Yu5FM, OKh21Yu9 and OKh21Yu10 iron-chrome-aluminum alloy wires up to 30 μ in diameter, used in high temperature tensoresistors. The studies are performed at temperatures up to 650°. The basic dependences of the resistivity increment of the wires under isothermal holding are established and critical temperatures are determined for each alloy, above which stabilization of the specific resistance and temperature factor of resistance of the tensoresistors is impossible. The possibility is demonstrated of creating thermal self-compensation of tensoresistors in the interval up to 350° using chrome-nickel alloys Kh20N80Yu and Kh20N80YuD. The temperature and time charac-
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USSR

UDC 620.17

AGARONIK, V. Ya., VASIL'YEV, A. A., DAYCHIK, M. L., Issled. Temperatur.
Napryazheniy, Moscow, Nauka Press, 1972, pp 103-132.

teristics of tensoresistors of nickel-molybdenum alloy in the temperature
range up to 500° are presented. 13 Biblio. Refs.

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USSR

UDC 531.781.087.92

AGARONIK, V. Ya., VASIL'YEVA, A. A., and DAYCHIK, M. L.

"Investigation of Characteristics of High-Temperature Resistance Tensors"

V Sb. "Issled. Temperatur. Napryazheniy" [In the Collection "Investigations of Thermal Stresses"], Moscow, "Nauka", 1972, pp 103-132 (from Referativnyy Zhurnal, No 11, Nov 72, 32. Metrologiya i Ismeritel'naya Tekhnika. Single Issue. Abstract No 11.32.369)

Translation: Methods and results are reported on investigations in the temperature range of up to 650°C of temperature and time characteristics used in high-temperature resistance tensors, wires 30 μ in diam., of Constantan, Nichrome, chromium and nickel containing alloys Kh20N80Yu and Kh20N80YuD, nickel-molybdenum alloy NM23KhYu, and ferro-chromium-aluminum alloys OKh21Yu5FM, OKh21Yu9, and OKh21Yu10. The principal increment dependences of the electric resistance of wires at isothermic aging were established and the critical temperatures for each alloy were determined above which a stabilization of the specific resistance and of the temperature coefficient of resistance tensors are impossible. The possibility is indicated to create self-thermobalanced resistance tensors in the interval of up to 350°C of chromium and nickel containing alloys Kh20N80Yu and Kh20N80YuD. Temperature and time characteristics
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USSR

AGARONIK, V. Ya., et al., V Sb. "Issled. Temperatur. Napryazheniy", 1972,
pp 103-132

of resistance tensors of the alloy containing chromium and nickel in the temperature range of up to 500°C are presented. Twenty two illustr., seven tables, thirteen biblio. refs.

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USSR

UDC: 550.837:622.241


DAYEV, D. S.

"A Method of Dielectric Electromagnetic Well Logging"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 19, 1970, Author's Certificate No 272450, p 63

Abstract: This Author's Certificate introduces a method of dielectric electromagnetic well logging which consists of exciting an electromagnetic field in the well by a frequency of the order of tens of megahertz and involves taking measurements of the difference in phases of the field at two points. As a distinguishing feature of the patent, the precision of determining the electrical properties of the rocks is improved by measuring the ratio of the amplitudes of the field at the same points and computing the dielectric permeability and resistance of the rocks from the results of the measurements.

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1/2 018 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--CATAMARAN EXPLOPER -U-
AUTHOR--DAVYGORODOV, G. 
COUNTRY OF INFO--USSR
SOURCE--VOENNY TRANSPORT, APRIL 25, 1970, P 4, COLS 2-6
DATE PUBLISHED--25APR70

SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR, EARTH SCIENCES AND
OCEANOGRAPHY
TOPIC TAGS--SHIPYARD, SHIPBUILDING ENGINEERING, OCEANOGRAPHIC SHIP,
GEOLOGIC EXPLORATION, OCEAN BOTTOM, SEISMOLOGIC INSTRUMENT/(U)GRUNT
SEISMOLOGIC INSTRUMENT

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1991/1251 STEP NO--UR/9028/70/000/000/0004/0004
CIRC ACCESSION NO--AN0110870
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AN0110870

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A NEW CATAMARAN TYPE SHIP IS BEING BUILT AT THE TAGANROG SHIPBUILDING FACTORY AND IS INTENDED FOR ENGINEERING AND GEOLOGICAL INVESTIGATION OF THE OCEAN BOTTOM. THE FLOATING PLATFORM IS TO BE EQUIPPED WITH A SEISMO ACOUSTIC STATION, GRUNT, FOR COMPLEX EXPLORATION. IT WILL ALSO HAVE A DRILLING PLATFORM AND AN UNDERWATER PENETRATION CORE LOGGING STATION. THE CATAMARAN IS TO BE 22 M LONG BY 14 M WIDE WITH A 450 HP ENGINE. GRUNT MAY BE USED IN SHALLOWS AND IN DEPTHS UP TO 200-300 M. A SEISMIC MAGNETIC RECORDER HAS BEEN ADDED TO THIS APPARATUS. GEOLOGICAL PROFILES MAY BE CHARTED AT SURFACE SPEEDS OF 2.5 TO 3.5 KNOTS.

UNCLASSIFIED

USSR

UDC 551.508.7.08

ZORGENFREY, V. G., DAYKER, A. L., BELOKUR, N. A.

"Lithium Chloride Self-Heating Electric Hygrometer"

Sb. Nauch. tr. Chelyabinsk. Politekhn. In-ta [Collected Scientific Works of Chelyabinsk Polytechnical Institute], 1971, No 105, pp 206-208, (Translated from Referativnyy Zhurnal, Metrologiya i Izmeritel'naya Tekhnika, 1972, No 5, Abstract No 5.32.1041, by V.S.K.).

Translation: A description is presented of a flow-through type absolute moisture content hygrometer developed by the Chelyabinsk Scientific Research Institute "Metallurg" in cooperation with "Teplopribor" plant for the measurement of the moisture content of non-corrosive gases and steam-air mixtures. A resistance thermometer is used to measure the equilibrium temperature. Any electronic automatic standard calibration 22 bridge can be used as the secondary instrument. The ranges of moisture content which can be measured are: dew point 0-40°C; 4.8-63.1 g/m (stp) dry; measurement error $\pm 1-4\%$; pressure of medium being measured 760 \pm 40 mm h.g. 4 Figures.

1/1

1/2 023 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--RESTORATIVE OPERATIONS ON THE FACE IN DEFORMING SEQUELAE OF LEPROSY
-U-
AUTHOR--DAYKHES, A.I. D
COUNTRY OF INFO--USSR
SOURCE--VESTNIK OTORINOLARINGOLOGII, 1970, NR 1, PP 40-45
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--PLASTIC SURGERY, LEPROSY, SKIN GRAFT, WOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1986/1456

STEP NO--UR/0607/70/000/001/0040/0045

CIRC ACCESSION NO--AP0103288

UNCLASSIFIED

2/2—023

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0103288

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN CONNECTION WITH THE ACHIEVEMENTS OF THE MODERN TREATMENT OF LEPROSY LEPROSARIA CEASED TO BE THE PLACE OF LIFE LONG ISOLATION OF PATIENTS AND THERE AROSE THE NECESSITY TO RENDER SURGICAL AID TO PERSONS TO ELIMINATE THE DEFORMING TRACES OF THE DISEASE. THE ARTICLE IS BASED ON THE EXPERIENCE OF 380 RECONSTRUCTIVE OPERATIONS ON THE FACE IN PATIENTS WITH A RESIDUAL STAGE OF LEPROSY. IN THE MAJORITY OF PATIENTS WHO HAVE SUSTAINED LEPROSY THERE IS SEEN A COMBINATION OF MANY TYPES OF DEFORMATIONS AND DEFECTS OF THE FACE, AND FOR THE CORRECTION OF FACIES LEONTINS A COMPLEX OF PLASTIC OPERATIONS IS REQUIRED. RECONSTRUCTIVE OPERATIONS ON THE FACE ARE INDICATED IN PATIENTS IN THE STAGE OF DEEP REGRESS AND RESIDUAL STAGE. THE AUTHOR REPORTS ON THE SUCCESSFUL CORRECTION OF DEFORMATIONS OF THE NOSE BY DISSECTION SUBCUTANEOUS CICATRICAL ADHESIONS AND CHONDROPLASTY; RESTORATION OF THE NOSE AND LIPS WITH FILATOV'S GRAFT AND INTERNAL LINING OF THE NOSE WITH FLAPS FROM CHEEKS ON CELLULAR TISSUE PEDICLES; ELIMINATION OF PARALYSIS OF FACIAL MUSCLES BY FASCIAL AND MUSCULAR FASCIAL PLASTIC REPAIR OF LAGOPHTHALMUS; RESTORATION OF EYE BROWS WITH ARTERIALIZED GRAFTS ON A HIDDEN PEDICLE AND OTHER RECONSTRUCTIVE AND COSMETIC OPERATIONS ON THE FACE IN LEPROUS PATIENTS. CLINICAL AND MORPHOLOGICAL INVESTIGATIONS TESTIFY TO THE FAVORABLE HEALING OF WOUNDS AFTER PLASTIC OPERATIONS ON THE FACE.

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1/2 023 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--RESTORATIVE OPERATIONS ON THE FACE IN DEFORMING SEQUELAE OF LEPROSY
-U-
AUTHOR--DAYKHES, A.I.
COUNTRY OF INFO--USSR
SOURCE--VESTNIK OTORINOLARINGOLOGII, 1970, NR 1, PP 40-45
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--PLASTIC SURGERY, LEPROSY, SKIN GRAFT, WOUND
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1986/1456 STEP NO--UR/0607/70/000/001/0040/0045
CIRC ACCESSION NO--AP0103288
UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0103288

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN CONNECTION WITH THE ACHIEVEMENTS OF THE MODERN TREATMENT OF LEPROSY LEPROSARIA CEASED TO BE THE PLACE OF LIFE LONG ISOLATION OF PATIENTS AND THERE AROSE THE NECESSITY TO RENDER SURGICAL AID TO PERSONS TO ELIMINATE THE DEFORMING TRACES OF THE DISEASE. THE ARTICLE IS BASED ON THE EXPERIENCE OF 390 RECONSTRUCTIVE OPERATIONS ON THE FACE IN PATIENTS WITH A RESIDUAL STAGE OF LEPROSY. IN THE MAJORITY OF PATIENTS WHO HAVE SUSTAINED LEPROSY THERE IS SEEN A COMBINATION OF MANY TYPES OF DEFORMATIONS AND DEFECTS OF THE FACE, AND FOR THE CORRECTION OF FACIES LEONTINS A COMPLEX OF PLASTIC OPERATIONS IS REQUIRED. RECONSTRUCTIVE OPERATIONS ON THE FACE ARE INDICATED IN PATIENTS IN THE STAGE OF DEEP REGRESS AND RESIDUAL STAGE. THE AUTHOR REPORTS ON THE SUCCESSFUL CORRECTION OF DEFORMATIONS OF THE NOSE BY DISSECTION SUBCUTANEOUS CICATRICAL ADHESIONS AND CHONDROPLASTY; RESTORATION OF THE NOSE AND LIPS WITH FILATOV'S GRAFT AND INTERNAL LINING OF THE NOSE WITH FLAPS FROM CHEEKS ON CELLULAR TISSUE PEDICLES; ELIMINATION OF PARALYSIS OF FACIAL MUSCLES BY FASCIAL AND MUSCULAR FASCIAL PLASTIC REPAIR OF LAGOPHTHALMUS; RESTORATION OF EYE BROWS WITH ARTERIALIZED GRAFTS ON A HIDDEN PEDICLE AND OTHER RECONSTRUCTIVE AND COSMETIC OPERATIONS ON THE FACE IN LEPROUS PATIENTS. CLINICAL AND MORPHOLOGICAL INVESTIGATIONS TESTIFY TO THE FAVORABLE HEALING OF WOUNDS AFTER PLASTIC OPERATIONS ON THE FACE.

UNCLASSIFIED

1/2 034 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--LOCAL ORDER IN A NICKEL ALUMINUM, 6.3 AT. PERCENT ALUMINUM, ALLOY
AND ITS INFLUENCE ON PHYSICAL PROPERTIES -U-
AUTHOR-(02)-KATSNELSON, A.A., DAZHAYEV, P.SH. *D*

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., FIZ. 1970, 13(4), 23-9

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--PHYSICAL CHEMISTRY PROPERTY, ALUMINUM ALLOY, NICKEL ALLOY,
CRYSTAL STRUCTURE, X RAY ANALYSIS, ALLOY ANNEALING, METAL MICROHARDNESS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3008/0602

STEP NO--UR/0139/70/013/004/0023/0029

CIRC ACCESSION NO--AT0137687

UNCLASSIFIED

2/2 034

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AT0137687

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. NI-AL (6.3PERCENT AL) ALLOY WAS OBTAINED IN AN INDUCTION OVEN. THE INGOT WAS HOMOGENIZED AT 1000DEGREES IN A VACUUM OVEN AND THEN IT WAS CUT IN A MILLING MACHINE INTO 3 PLATES: ONE BEING 2 MM THICK, AND THE OTHER TWO BEING 4 MM THICK. THE 4 MM THICK SAMPLES WERE ROLLED TO 2 MM AND CUT INTO 3 PORTIONS. TWO PORTIONS WERE USED TO MEASURE THE DIFFUSE SCATTERING OF X RAYS AND THE MICROHARDNESS, AND THE 3RD WAS ROLLED FURTHER TO 0.10-0.15 MM. THE SPECIMENS WERE ANNEALED IN A VACUUM OVER (3-5 TIMES 10 NEGATIVE PRIMES TORR) AT 300, 400, AND 700DEGREES. THE EXPTL. RELATIONS BETWEEN LIGHT DIFFUSION INTENSITY AND I ARE DESCRIBED FOR SAMPLES ANNEALED AT 300 AND 400DEGREES. THE MAX. DIFFUSE SCATTERING POINT WAS LOCATED NEAR THE SUPERSTRUCTURAL LINE (100). AT 700 AND 400DEGREES MAXIMAL DIFFUSION IS REACHED ALREADY AFTER 1 HR OF ANNEALING, WHEREAS AT 300DEGREES THE MAX. IS REACHED ONLY AFTER 3 HR ANNEALING. BACKGROUND INTENSITY DOES NOT INCREASE WITH I, THUS INDICATING THAT THE SIZE EFFECT IN THE EXPTL. ALLOY IS OF LITTLE IMPORTANCE. FACILITY: MOSK. GOSUNIV. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

USSR

DEC 002 24:339.292

DAZHAYEV, P. Sh., and KATSNEL'SON, A. A., Moscow State University Leningrad M. V. Lomonosov

"Atomic Local Ordering in Ni-Si Alloys at 300 and 400° C"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 30, No 3, Sep 79, pp 663-665

Abstract: Studies show that the process of ordering in Ni-Si alloys (7at.% Si) with isothermal annealing after deformation (300-400°) begins with the establishment of close order at short distances, then leads to the appearance of local order in various forms. At later stages, at least partial resorption of these formations occurs.

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USSR

UDC: 621.378.3

VASIL'YEV, A. M., DE, S. T., and LOGINOV, A. V.

"Laboratory Argon Laser With a Discharge Channel of Beryllium Oxide"

Novosibirsk, Avtometriya, No 5, 1972, pp 125-126

Abstract: Details are given of an argon ion laser, developed by the authors, which is capable of standing up under long use in the laboratory. A photograph of the laser is shown. The discharge channel of the device is a beryllium oxide tube 350 mm long and 3 mm in diameter. The choice of this material was dictated by the fact that it has the highest heat conductivity of all the insulating ceramics and can stand thermal shock. The optical resonator consists of a spherical mirror and a plane mirror from which the radiation emerges. Oscillation occurs in six lines in the 4579-5145 Å range, with a total power of five watts. It is noted that most industrially produced ion lasers in the Soviet Union have quartz discharge channels. This is a mistake, in the authors' opinion, since quartz has low heat conductivity and consequent high inner wall temperatures, with resultant shorter life. They express
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USSR

UDC: 621.378.3

VASIL'YEV, A. M., et al, Avtometriya, No 5, 1972, pp 125-126

their gratitude to Yu. Ye. Nesterekhin and A. G. Kozachok for their attention to the work.

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USSR

UDC: 621.396.6.019.3

DEART, A. F., VOLKOV, V. S.

"On the Problem of the Accuracy Characteristics of Evaluating Reliability of Semiconductor Circuits From the Results of Accelerated Tests"

Tr. Radiotekhn. in-ta AN SSSR (Works of the Radio Engineering Institute of the Academy of Sciences of the USSR, 1970, No 3, pp 109-117 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6V279)

Translation: A study is made of the problems of evaluating accuracy characteristics of determination of the reliability of semiconductor circuits from the results of accelerated tests to obtain the confidence intervals of failure rates. Recommendations are given on the profitability of accelerated tests of semiconductor circuits. Resumé.

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USSR

UDC 621.396.69(088.8)

VALITOV, M. S., VOLKOV, B. A., FEDYUNIN, V. M., DEART, A. F., KSEHOPONTOV, Ye. A.,
Moscow Mining Institute

"A Device for Physical Modeling of Radio Electronic Circuits"

USSR Author's Certificate No 255665, Filed 13 Mar 67, Published 12 Mar 70 (from
RZh-Radiotekhnika, No 10, Oct 70, Abstract No 10V402 P)

Translation: The proposed device is based on the use of a random number pickup
whose output is connected to the movable contact of a step switch in the situation
set-up module. This step switch is connected to the control windings of actuating
relays, indicator lamps and pulse counters. N. S.

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1/2 009 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--STRUCTURE OF DNA AND HISTONES IN THE NUCLEOHISTONE -U-
AUTHOR--(04)-PERMOGOROV, V.I., DEBADOV, V.G., SLADKOVA, I.A., REBENTISH,
B.A.
COUNTRY OF INFO--USSR
SOURCE--BIOCHIM. BIOPHYS. ACTA 1970, 199(2), 556-8
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--DNA, MOLECULAR STRUCTURE, BUFFER SOLUTION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1997/0313 STEP NO--NE/0000/70/199/002/0556/0558
CIRC ACCESSION NO--AP0119300
UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119300

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CD AND UV MEASUREMENTS OF NATIVE SOL. NUCLEOHISTONE FROM CALF THYMUS AND ITS COMPONENTS AT SEVERAL SALT CONCNS. ARE REPORTED. CD CURVES WERE OBTAINED FOR NUCLEOHISTONE, NATIVE DNA, DENATURED DNA, AND HISTONES IN DIL. PHOSPHATE BUFFER (0.7 M, PH 6.8). CD CURVES WERE ALSO OBTAINED AT INCREASING SALT CONCNS., UP TO 2M NaCl (IN ADDN. TO PHOSPHATE BUFFER). CHANGES IN CD OF NATIVE DNA BROUGHT ABOUT BY HIGH SALT CONC. WERE EXHIBITED IN A DECREASE OF THE PEAK NEAR 275 NM; IN 2M NaCl THERE WAS A SIMILAR DECREASE IN THE PEAK OF THE NUCLEOHISTONE IN DIL. BUFFER. THE CD SPECTRUM OF DENATURED DNA OVER THE RANGE 260-300 NM WAS RELATIVELY UNAFFECTED BY SALT CONC. THESE AND OTHER DATA SUGGESTED THAT IN SOL. NUCLEOHISTONE DNA HAS A DOUBLE HELIX CONFORMATION CLOSELY RELATED TO THE CONFORMATION OF DNA IN SOLN. OF HIGH SALT CONC., AND THE HISTONES ASSUME THE PARTIAL ALPHA HELIX CONFORMATION. FACILITY: INST. GENET. SELECT. MICROORG., MOSCOW, USSR.

UNCLASSIFIED

1/2 025 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--THE INVESTIGATION OF DNP STRUCTURE AND ITS COMPONENTS BY OPTICAL
METHODS -U-
AUTHOR--(04)-PERMOGOROV, V.I., SLADKOVA, I.A., DEBABOV, V.G., REBENTISH,
B.A.
COUNTRY OF INFO--USSR
SOURCE--MOLEKULYARNAYA BIOLOGIYA, 1970, VOL 4, NR 3, PP 359-366
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--DNA, PROTEIN, MOLECULAR STRUCTURE, BIOLOGIC STAIN,
SPECTROPHOTOMETRY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1998/0152 STEP NO--UR/0463/70/004/003/0359/0366
CIRC ACCESSION NO--AP0120852
UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120852

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE INVESTIGATION OF CIRCULAR DICHROISM OF DNP, DNA AND HISTONES HAS BEEN CARRIED OUT. THE COMPARISON OF CURVES OF DNP CURCULAR DICHROISM WITH THOSE OF DNA IN SOLUTION AT VARIOUS NACL CONCENTRATIONS SHOWED THAT DNA IN DNP WAS NATIVE AND THAT ITS STATE IN DNP WAS SIMILAR TO THE STATE OF DNA IN 2 M NACL. IT WAS SHOWN THAT THE HELICAL CONTENT OF HISTONES IN DNP WAS EQUAL TO 44PERCENT. THE RESULTS OF INVESTIGATION OF ORD COMPLEXES OF ACRIDINE ORANGE WITH DNA AND DNP MAKE IT POSSIBLE TO CONCLUDE THAT DNA IN DNP IS NATIVE AND THAT A PART OF DNA IS FREE OF HISTONES. THE SPECTROPHOTOMETRIC TITRATION AND THE INDUCED OPTICAL ROTATORY DISPERSION MEASUREMENTS AT LOW RATIOS OF DYE: BINDING SITES INDICATED THAT APPROXIMATELY 20 PER CENT OF DNA IN DNP WAS FREE OF HISTONES. FACILITY: INSTITUTE OF GENETICS OF MICROORGANISMA, MOSCOW.

UNCLASSIFIED

USSR

UDC: 621.372.832.8(088.8)

DEBEL', B. M., NIKOLAYEVA, K. S.

"A Y-Circulator Based on Lumped Reactive Elements"

USSR Author's Certificate No 281580, filed 28 Dec 67, published 30 Nov 70
(from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6B185 P)

Translation: The proposed Y-circulator based on lumped reactive elements contains a central strip made in the form of an inductance coil encompassing ferrite discs, grounded covers and magnets. To improve electrical characteristics, the coils are made in the form of thin foil frames forming a connection of the "star" type with the common point connected to brass discs which form a series capacitance between the coils and the grounded covers.

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USSR

UDC 621.385.64

SHLIFER, E.D., DEBELOV, D.T.

"Subexcitation Of Coaxial Magnetron By Exterior Microwave Signal"

Elektron. tekhnika. Nauch.-tekhn. sb. Elektron. SVCh (Electronics Technology. Scientific-Technical Collection. Microwave Electronics), 1971, Issue 6, pp 3-8 (from RZh--Elektronika i yeye primeneniye, No 10, October 1971, Abstract No 10A155)

Translation: The experimental results are presented of subexcitation of a coaxial magnetron by an exterior signal. It is shown that in a subexcitation regime the rate of buildup of high-frequency oscillations is increased several-fold at the level of the subexciting signal and at 40-50 db below the output. In a regime of regenerative amplification a coaxial magnetron has a considerably larger amplification factor than the classical analog. The band of the frequencies of subexcitation and regenerative amplification is determined not by a decrease of power but by the level of the fluctuations of the front of the high-frequency pulse. 5 ref. Summary.

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USSR

UDC 621.385.64

DEBELOV, D.F.

"Concerning One Method Of Suppression Of Mode H_{121} Oscillations In A Coaxial Magnetron"

Elektron. tekhnika. Nauchno-tekhn. sb. Elektron. SVCh (Electronic Technology. Scientific-Technical Collection. Microwave Electronics), 1970, No 8, pp 11-16
(from RZh--Elektronika i yeye primeneniye, No 12, December 1970, Abstract No 12A157)

Translation: The paper considers a method for suppression of Mode H_{121} oscillations with the help of a supplementary load consisting of a section of coaxial line with an absorber. Computed and experimental dependences are presented of the loaded and exterior Q factor, on the geometry and parameters of the supplementary load. 4 ref. Summary.

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USSR

UDC 621.385.64

DEBELOV, D. T.

"Calculation Of The Magnitude Of The Added Resistance Of The Load In A Coaxial Magnetron"

Elektron. tekhnika. Nauchno-tekhn. sb. Elektron. SVCh (Electronics Technology. Scientific-Technical Collection. Microwave Electronics.), 1970, No 2, pp 43-52 (from RZh--Elektronika i yeye primeneniye, No 8, August 1970, Abstract No 8A116)

Translation: The derivation is presented of an equation for determining the magnitude of the added resistance of the load as a function of the characteristic impedances of the decelerating system and the stabilizing resonator. A formula is obtained by the electrodynamic method for calculation of the characteristic impedance of the stabilizing resonator as a function of its geometry. A comparison of the results of calculations and experiments showed their satisfactory agreement. Summary.

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USSR

UDC 576.311

DEBORIN, G. A., EL'PINER, I. Ye. (Deceased), BARANOVA, V. Z., SOROKINA, A. D., and TONGUR, A. M., Institute of Biochemistry imeni A. N. Bakh, Academy of Sciences USSR, and Institute of Chemical Physics, Academy of Sciences USSR, Moscow

"The Reaction of Tobacco Mosaic Virus With Phospholipid Monolayers Exposed to Ultrasound"

Moscow, Doklady Akademii Nauk SSSR, Vol 198, No 6, Jun 71, pp 1,445-1,448

Abstract: Curves showing the expansion and compression of a monolayer of pure phospholipids (obtained from cattle brain) and of a monolayer of phospholipids with tobacco mosaic virus coincided in shape and values of maximum pressures, suggesting that the virus did not penetrate into the surface film of the phospholipids. On the other hand, curves showing the compressibility of sonicated phospholipids and sonicated phospholipids with tobacco mosaic virus diverged considerably, indicating that the layer of phospholipids was penetrated by the virus. In other words, a monolayer of sonicated phospholipid is capable of incorporating virus particles to form a mixed phospholipid -- virus film. Thus, a change in the condition or structure of a biological membrane (or its individual constituents) can influence its

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Acc. Nr.

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Abstracting Service:
CHEMICAL ABST.

5-70

Ref. Code

4/R0020

107335b Effect of the presence of substrate and inhibitors of ribonuclease on its transport through a synthetic lipid membrane in a model system. Deborin, G. A.; Yanopol'skaya, N. D.; Oparin, A. I. (Inst. Biokhim. im. Bakha, Moscow, USSR). *Dokl. Akad. Nauk SSSR* 1970, 190(3), 720-1 [Biochem] (Russ). Formation of an RNase-substrate-inhibitor complex (with RNA, a mixt. of mononucleotides, or heparin) favored RNase transport through model lipid membranes. This verifies previous predictions that formation of the Michaelis complex is important in the mechanism of RNase transport to its substrate through the lipid membrane. BJJR

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USSR

UDC: 577.153.35

DEBORIN, G.A., YANOPOL'SKAYA, N.D., and OPARIN, A.I., Academician, Institute of Biochemistry imeni A.N. Bakh, Academy of Sciences USSR, Moscow

"The Effect of Substrate and Competing Ribonuclease Inhibitors on Ribonuclease Transfer Across an Artificial Lipid Membrane in a Model System"

Moscow, Doklady Akademii Nauk SSSR, Vol 190, No 3, Jan 70, pp 720-721

Abstract: The experimental apparatus consisted of chambers A and B separated by a membrane. Chamber A was filled with a mixture of an enzyme and competing inhibitor, and chamber B with distilled water. The system was kept for 3 hrs at 37°C, then the enzyme content in chamber B was determined by the Fiers and Stocks method. RNA, heparin and mononucleotides obtained by treating RNA with ribonuclease were used as competing inhibitors. Separate experiments have shown that neither of these components acts destructively on the lipid membrane. It was determined that these materials facilitate passage of the enzyme molecules across the membrane. It was postulated that the formation of a complex enzyme-competing inhibitor leads to a conformation of enzyme protein facilitating its transport in the form of a labile compound with membrane lipids.

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1/2 030 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--POLYMERIZATION OF EPICHLOROHYDRIN WITH TRIETHYLALUMINUM, WATER,
TRIFLUORETHANOL OR TRIETHYLALUMINUM, TRIFLUOROETHANOL CATALYTIC SYSTEMS
AUTHOR--(C3)-PONOMARENKO, V.A., DEBORIN, M.G., SERGEYEV, I.A.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (4), 925-6
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, MATERIALS
TOPIC TAGS--POLYMERIZATION, EPICHLOROHYDRIN, ORGANICALUMINUM COMPOUND,
CATALYST, FLUORINATED ORGANIC COMPOUND, FROST RESISTANCE, ETHANOL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
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CIRC ACCESSION NO--AP0134987
UNCLASSIFIED

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 CIRC ACCESSION NO--AP0134987 UNCLASSIFIED PROCESSING DATE--20NOV70
 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE POLYMN. OF EPICHLOROHYDRIN AT
 20DEGREES IN THE PRESENCE OF 0.1PERCENT 1.0:0.3:0.2 ALET SUB3, H SUB2
 O,CH SUB3 CH SUB2 OH CATALYST MIXT. GAVE 65PERCENT POLYMER OF MOL. WT.
 154,000. THE POLYMN. WITH 0.1PERCENT 1:0.8 AL, ET SUB3, CH SUB3 CH SUB2
 OH GAVE 52PERCENT POLYMER OF MOL. WT. 112,000. THESE POLYMERS WERE LESS
 THAN OR EQUAL TO 4PERCENT CRYST., HAD LOW GLASS TEMP. AND WERE EXPECTED
 TO HAVE BETTER COLD RESISTANCE THAN SIMILAR POLYMERS PREPD. WITH ALET
 SUB3, H SUB2 O, SOLVENT SYSTEMS (BRIT. 848,306). FACILITY: INST.
 ORG. KHIM. IM. ZELINSKOGO, USSR.

UNCLASSIFIED

USSR

DEBOV, A., Academician, Academy of Medical Sciences USSR

"Reality or Fantasy: Prospects for Curing Hereditary Diseases by Transplanting Genes"

Moscow, Trud, 6 Oct 72, p 4

Abstract: The 24th Congress of the Communist Party of the Soviet Union has given molecular biology an important role at the crossroads of biology, chemistry and physics. One important direction in research is connected with the study of the genetic apparatus of cells, the other with the function of the apparatus which is responsible for the function of various proteins in the organism. About 40 years ago the English microbiologist Griffith discovered that if killed virulent and live nonvirulent *Pneumococci* were introduced into animals, the animals died shortly and live virulent bacteria could be isolated from their bodies. Sixteen years later a group of scientists tried to isolate the agent causing this and discovered that it was DNA. They also concluded that DNA was at the heart of the chromosomes. In recent times DNA's key importance has been more fully explained; a few years ago its laboratory synthesis was achieved. Some individual genes have been synthesized as well, and there are prospects for their use in treating hereditary diseases. For example, infants suffering from galactosemia

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